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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/690,136	07/31/1996	KEVIN A. BRADY	96B011	9592

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EXAMINER

TARAZANO, DONALD LAWRENCE

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/690,136

Applicant(s)

BRADY ET AL

Examiner

D. Lawrence Tarazano

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 26 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 51-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 68, 71, 74, 77, 80, 83, and 86 is/are allowed.
- 6) ☐ Claim(s) 51-67, 69, 70, 72, 73, 75, 75, 76, 78 79, 81, 82, 84, 85, and 87-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 41.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 8-26-2003 has been entered.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 51-53, 55, and 58-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoyama et al. (4,921,653).
3. Aoyama et al. (Examples Table 2) teach films comprising a mixture of LDPE, Polypropylene or HDPE, mixed with 150 parts inorganic filler (60%). The breathable films are rolled between heated embossing rollers. The temperature for embossing is [Tm-40 deg C] to [Tm+20 deg C] (column 4, lines 10-25), in which the second set of examples appear to be heated from 90 deg C to 110 deg C, (194 deg F.). The water vapor permeability of the films is very high and values above 550 are seen for most of the examples, all of which put the films within the claimed range.

4. Regarding claims 55+, a mixture of polymers can be used (column 2, lines 30-40, in which HDPE is one of the components listed.
5. Because of the amount of filler and the stretching ratio, the examiner believes that the films taught would have the claimed density.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 51-53, 55, and 57-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama et al. (4,921,653).
8. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used blends of HDPE and other resins from those listed, since blends are suggested. This merely involves practicing the invention within the metes and bounds of the reference.
9. Regarding claim 57, Aoyama et al. generically teaches that HDPE may be used. The applicants claim a copolymer. In the absence of unexpected result, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used a copolymer for the HDPE component taught by Aoyama et al. as long as the materials met the density requirements. The examiner notes that the applicants have no showing of criticality with respect to the use of copolymers and no particular amount of comonomer is required.

10. Claims 51-53, 55, 57-59, 61-65, and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. (5,865,926) in view of Aoyama et al. (4,921,653).

11. Wu et al. teach films which have been embossed by grooved rollers (figures 1 and 2). The films are porous as shown by example 1, have the claimed WVTR, and are olefin / filler compositions which have been laminated to a non-woven fibrous web. The laminated structure is passed through intersecting grooved rollers so the entire structure including the non-woven fibrous web has been passed through the grooved rollers. Example 1 is made by lamination / extrusion which results in a two-layer structure with no adhesive layer, this two-layer structure would be the same as the applicants heat bonded structure. The other examples use a layer of adhesive which would correspond to the applicant's second film in which these structures have vapor permeabilities in the claimed range. However, they are silent regarding the change in the size of the structure when they are passed through the rollers or the temperature used.

12. Aoyama et al. (Examples Table 2) teach films comprising a mixture of LDPE, Polypropylene or HDPE, mixed with 150 parts inorganic filler (60%). The breathable films are rolled between heated embossing rollers. The temperature for embossing is $[T_m - 40 \text{ deg C}]$ to $[T_m + 20 \text{ deg C}]$ (column 4, lines 10-25), in which the second set of examples appear to be heated from 90 deg C to 110 deg C, (194 deg F.). The water vapor permeability of the films is very high and values above 550 are seen for most of the examples, all of which put the films within the claimed range.

The extent of stretching / embossing would relate to the size of the porous around the particles used, in which Aoyama et al. show the extent of embossing and degree of stretching is directly related to the degree of permeability. Thus, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to have varied the extent of stretching / embossing and the amount of particles present depending on the extent of water vapor transmission desired.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used heated rollers as taught by Aoyama et al. because they are useful in promoting a well defined embossed surface.

13. Claims 54, 55, 56, and 58-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. (5,865,926) and Aoyama et al. (4,921,653) view of Sheth et al. (5,055,338).

Wu et al. and Aoyama et al as discussed above is silent regarding the use of elastomers. However, Sheth et al. teach that the addition of elastomers in olefin permeable films results in stronger structures. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have included olefin elastomers such as those claimed in the films taught by Wu et al. in order to make the structures stronger.

The films for example taught by Aoyama et al. are heated to be stretched, thus they are heated prior to being put in the embossing rollers.

14. Claim 51-56, 58-67, 69, 70, 72, 73, 75, 76, 78, 79, 81, 82, 84, 85, 87, 88, and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheth et al. (5,055,338) in view of Wu et al. (5,865,926) and Aoyama et al. (4,921,653).

Sheth et al. teach embossed films. These films are produced from a blend of polyethylene material and inorganic filler (50/50 blend of LLDPE and calcium carbonate) and polyisobutylene, example 1). The films also can comprise elastomers to improve the strength and softness of the resulting films (column 5, lines 13+).

The films are formed by a tubular extrusion process, which results in the formation of a tubular film, which is blown, and then stretched on rollers using conventional techniques. The tubular film is embossed after it has been formed (columns 5 and 6, especially column 6, lines 8+). The embossing can occur at any point in production (column 6, lines 3+) by methods known in the art.

A collapsed tubular film as shown by Sheth et al. would correspond to the claimed two-layer structure. These films have high WVTR relates in both the metallized and un-metallized forms as shown by example 1. While the example is produced by cast extrusion, Sheth et al. teach how to produce blown films with very clear specificity, thus the claimed two-layer structure is taught. However, they are silent regarding: The specific use of interlocking rollers, the claimed roller temperatures, the change in the size of the structure when they are passed through the rollers, or pre-embossing the films.

Wu et al. teach permeable films which have been embossed by grooved rollers (figures 1 and 2). The films are porous as shown by example 1, have the claimed WVTR, and are olefin / filler compositions.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the interlocking embossing rollers taught by Wu for the embossing step in the films taught by Sheth et al. since rollers of this type are useful in the production of permeable films from filled compositions. Furthermore, Sheth et al. state that embossing can generally be performed by methods known in the art.

Regarding the embossing temperature, the applicants claim embossing temperatures in the range of 160 °F to 220 °F, it would have been obvious to one having ordinary skill in the art

at the time the invention was made to have used heated rollers as taught by Aoyama et al. because they are useful in promoting a well defined embossed surface.

Furthermore, while the applicants' claim embossing temperatures of 160 °F to 220 °F there is nothing on the record to establish that these recited processing conditions results in a materially different product. The applicants state on page 10 of the specification that they can use embossing temperatures of 50-130 °F and on page 14 lines 4+ state that an embossing temperature of 160-220°F can be used and there is no indication that either temperature is preferred.

Since the extent of stretching / embossing would relate to the size of the porous around the particles used, and the three dimensional size of the laminate, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have varied the extent of stretching / embossing and the amount of particles present depending on the extent of water vapor transmission desire, since increased stretching/ embossing would increase the overall size of the laminate and contribute to the porosity of the laminate. Stretching a film by a factor of 1.5 to 3 would directly correspond to a decrease in weight per unit area by the same factor.

Regarding claim 55, Seth teaches that the strength and softness of the films may be improved by the addition of a small amount of olefinic-elastomer (column 5, lines 13+). The applicants claim ethylene alpha-olefin rubber or ethylene alpha-olefin diene monomer rubber. The examiner takes the position that these are different ways of describing the essentially same class of materials.

Regarding claim 58, Wu uses his embossing rollers in the machine direction.

Regarding claim 59, a House wrap has no particular structure per se; it is merely a film. The applicants do not claim any particular structure, which would differentiate a house wrap

from the films taught by Seth et al. The metallized films taught by Seth et al. would be suitable as a house wrap since they are useful in exterior environments (column 3, lines 15+), thus meet the claim.

Regarding claims 70 and 72, as shown by Wu, the film is tangential to the surface of the roller and then follows the roller until it meets the second roller. This takes about 1/4 a revolution as shown by the figure.

Response to Arguments

15. Applicant's arguments with respect to all the claimed have been considered but are moot in view of the new ground(s) of rejection. Claims 51-67, 69, 70, 72, 73, 75, 76, 78 79, 81, 82, 84, 85, and 87-89 are rejected. Claims 68, 71, 74, 77, 80, 83, and 86 are allowed. The closest prior art as discussed above fails to teach the fabric / film laminates in which both layers are sent through the embossing rollers as claimed.

16. The drawings submitted with the last correspondence are acceptable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Lawrence Tarazano whose telephone number is (703)-308-2379. The examiner can normally be reached on 8:30 to 6:00 (off every other Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on (703)-309-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0661.

D. Lawrence Tarazano
Primary Examiner
Art Unit 1773

November 2, 2003

A handwritten signature in black ink, appearing to be 'DT' inside a circle, with a vertical line extending from the bottom of the circle.